

Notes on the *Orthosia rorida* (Frivaldsky, 1835)  
species group, with the description of a new species  
from Crete : *Orthosia sellingi* sp. n.  
(Lepidoptera, Noctuidae, Hadeninae)

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### Summary

Notes on species in the *Orthosia rorida* (Frivaldsky, 1835) group are given. *Orthosia sellingi* sp. n. is described from the Greek island of Crete. *O. ganimetae* Kornosor & Lödl, 1990 is synonymised with *O. rorida*.

### Zusammenfassung

*Orthosia sellingi* sp. n. wird aus Kreta beschrieben. Nebst Informationen zu anderen Arten der *Orthosia rorida* (Frivaldsky, 1835) Gruppe wird das Taxon *O. ganimetae* Kornosor & Lödl, 1990 mit *O. rorida* synonymisiert.

### Résumé

Description d'*Orthosia sellingi* sp. n. de Crête. Les auteurs renseignent sur d'autres espèces du groupe d'*Orthosia rorida* (Frivaldsky, 1835) et synonymisent le taxon *O. ganimetae* Kornosor & Lödl, 1990 avec *O. rorida*.

The Greek island of Crete in the eastern Mediterranean is well known for its many endemic species and subspecies. In this way it is similar to some of the other islands in the Mediterranean : Cyprus, Corsica and Sardinia. Cyprus and Crete are the two entomologically less well studied islands and new species are still being discovered.

On a trip to Crete in 1993, Åke Selling, although unable to join the rest of his family, managed to equip his wife and son with some sugar ropes. The sugar ropes were hung up near Agra Marina Stalos and, among others species, seven specimens of a noctuid species which looked like *O. rorida* Frivaldsky, 1835 were captured. It was later discovered that the specimens represented a new species. Other specimens

of this new species were found in the material from Crete collected by Hans Malicky (now in coll. Hacker, Behounek and Thöny).

### *Orthosia sellingi* sp. n.

HOLOTYPE : 1 ♂, Greece, Crete, west of Agra Marina Stalos, 2.IV.1993 (gen. prep. Fibiger) (leg. Selling, coll. Fibiger).

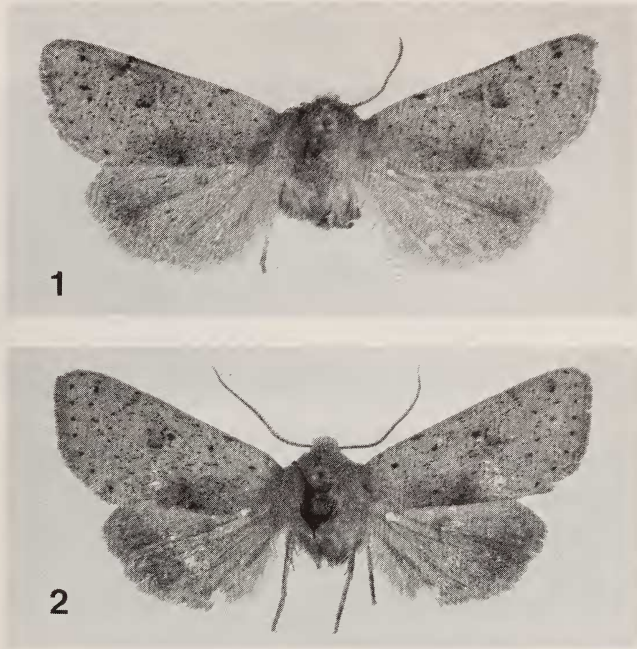
PARATYPES : 1 ♀ (allotype) (gen. prep. Fibiger) (coll. Selling) and 6 ♂♂ from the same locality as the holotype, 2.-14.IV.1993 (allotype 14.IV.1993) (coll. Selling, Fibiger & Moberg) ; 3 ♂♂, Crete, Kastellakia, 4.II.1978, 27.II.1978 (gen. prep. Hacker N 6226, 6224, 6279) (leg. Malicky, coll. Hacker) ; 2 ♂♂, Crete, Meso Potami, 900 m, 23.II.1982 (gen. prep. Hacker N 6213) (leg. Malicky, coll. Hacker) ; 6 ♂♂, Crete, Kastellakia, 24°29'/35°22', 18.II.-15.III.1978, dto 1 ♀, 22.II.1978 (leg. Malicky, coll. Behounek) ; 5 ♂♂, 1 ♀, Crete, Sisses, 24°52'/35°24', 11.-22.II.1978, 1 ♂, 12.I.1979, (leg. Malicky, coll. Thöny) ; 2 ♂♂, 3 ♀♀, Crete, Mt. Ida, 1600 m, 23.IV.1995 ; 1 ♂, Crete, Kalami, 700 m, 22.IV.1995 ; 1 ♂, Crete, Hora Spakion, 30 m, 21.IV.1995 (leg. Fibiger & Selling).

### Description

MALE (Fig. 1) : Wingspan 37-38 mm. Antenna strongly bipectinate. Labial palpi short, dark coloured. Head, thorax and ground colour of forewing grey. Forewing suffused with black scales. Reniform stigma defined by black spot, other stigmata hardly visible. Crosslines weakly marked, often absent. Subterminal line most often absent, but sometimes visible close to costa or represented by two spots between reniform and termen, as in *Orthosia munda* (D. & S.). Dorsum shaded darker medially in some specimens. Terminal line indicated by row of black dots between veins. Abdomen and hindwings unicolorous dark, ochreous brown. Terminal line absent.

FEMALE (Fig. 2) : Wingspan 35 -37 mm. Antenna bipectinate, lamellae half the length of those of male. Coloration and wing-pattern as in male.

MALE GENITALIA (Figs 6, 7) : Uncus short, pointed. Juxta twice as long as broad ; broadest basally. Valves broad, abruptly narrowing distally to a short pointed cucullus, directed ventrally. Clasper long, pointed, curved to almost 90°, not reaching tip of cucullus. Sacculus heavily sclerotised. Vinculum V-shaped. Aedeagus long, narrow. Carina heavily sclerotised, with field of short spines terminally. Everted vesica



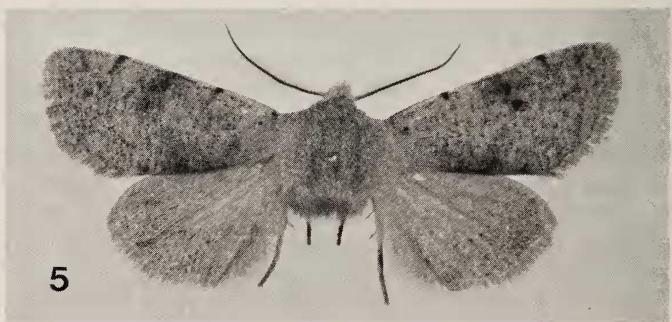
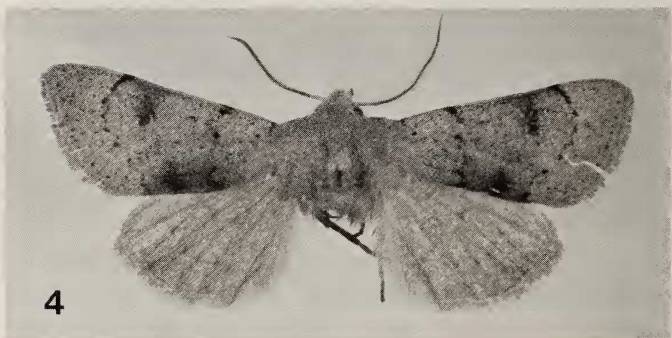
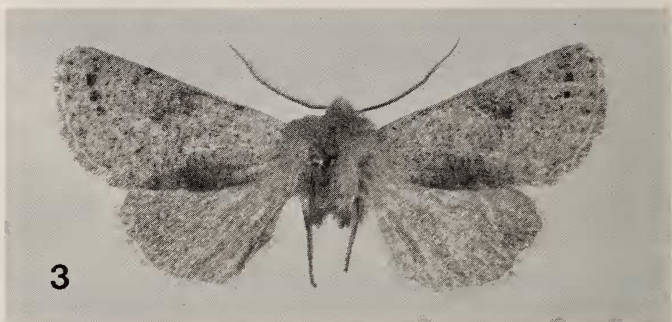
Figs 1, 2. *Orthosia sellingi* sp. n. 1 — Holotype, ♂ ; 2 — Allotype, ♀. Photos G. Brovad, Zoological Museum, University of Copenhagen.

short, of same width as aedeagus, projecting  $180^\circ$  from tip of aedeagus. Two separate rows of long cornuti.

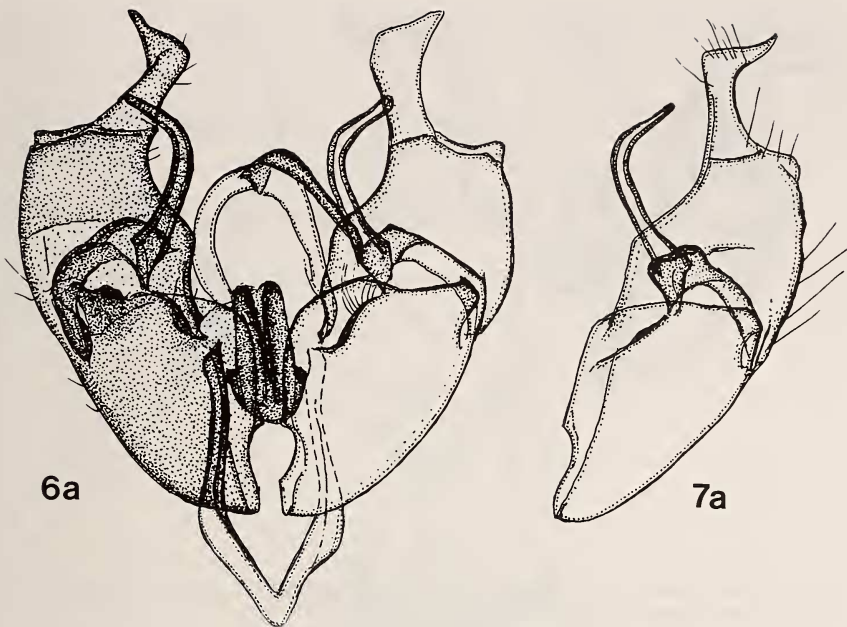
**FEMALE GENITALIA** (Fig. 8) : Anal papillae short, broad. Both apophyses short, the anterior apophyses reaching beyond antrum. Antrum, ostium and ductus bursa heavily sclerotised. Ventral fissure in ostium, equally narrow at top and base. Ventral plate of seventh segment strongly sclerotised, broadly rounded. Ductus bursae slightly bent lateral-ventrally. Base of corpus bursae and appendix bursae moderately sclerotised. Corpus bursae with four signa-belts placed opposite each other. These are difficult to see when the corpus bursae contains a spermatophore.

### Differential diagnosis

The known specimens of *O. sellingi* sp. n. exhibit small superficial differences to *O. rorida* Friv. (Figs 3-5). The ground colour of the forewing is pure grey in *O. sellingi* sp. n., whereas in the other species



Figs 3-5. *Orthosia rorida* (Frivaldsky, 1835). 3 — ♂, Macedonia, Katcanovo, 250 m, 9.IV.1982. Leg. P. Jaksic, coll. M. Fibiger ; 4 — ♂, Greece, Kilkis, 350 m, 1.IV.1985. Leg. M. Fibiger ; 5 — ♂, Greece, Evro, Kirki, 500 m, 2-3.IV.1985. Leg. M. Fibiger. Photos G. Brovad.

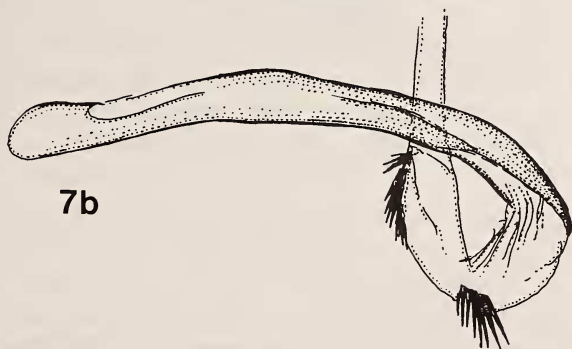


6a

7a



6b



7b

Figs 6, 7. Male genitalia of *Orthosia sellingi* sp. n. 6a,b — Holotype (gen. prep. Fibiger 1883); 7a,b — Crete, Kastellakia, 27.II.1978, (gen. prep. Hacker 6279).

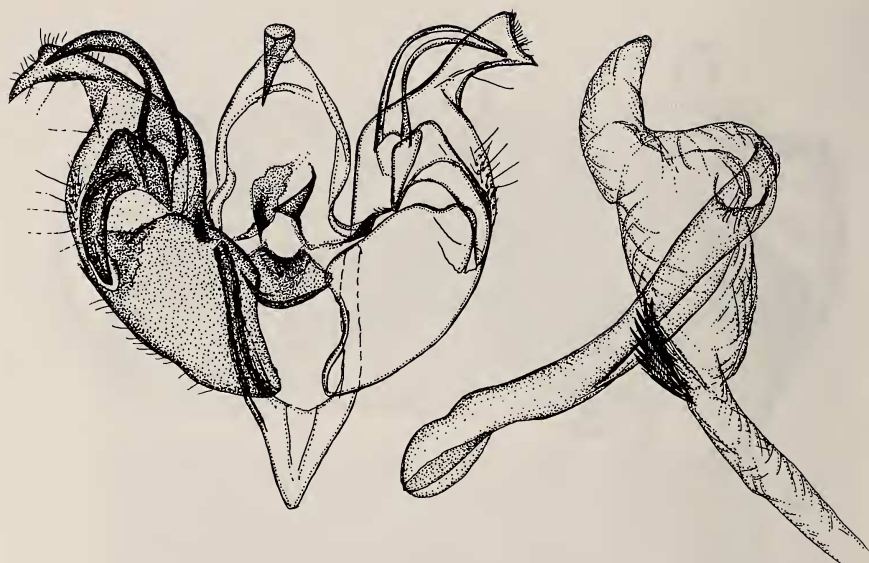


Fig. 8. Male genitalia of *Orthosia rorida* (Frivaldsky, 1835). Greece, Kilkis, 350 m, 1.IV.1985 (gen. prep. Fibiger 1893).

of the *O. rorida* group the ground colour is suffused brownish. Further, the terminal line of the hindwing is absent in *O. sellingi* sp. n., but almost always present in *O. rorida* Friv. The genitalia differences are marked. For comparison, the male and female genitalia of *O. rorida* Friv. are also figured (Figs 8, 10) together with the female genitalia of *O. wolffi* Hacker, 1988 (Fig. 11). The male of *O. wolffi* Hacker is unknown.

The clasper in *O. rorida* Friv. is the same length as that of *O. sellingi* sp. n., but the valve is much shorter so that the tip of the clasper reaches the cucullus. The valve in *O. sellingi* sp. n. narrows abruptly distally, whereas it narrows only gradually in *O. rorida* Friv. The juxta in *O. rorida* Friv. is small, broader than long, but longer than broad in *O. sellingi* sp. n. Apart from the quite different form of the everted vesica between the two species, only a single field of long cornuti is present in *O. rorida* Friv., compared to two in *O. sellingi* sp. n.

In the female genitalia the differences between the three species are most obviously seen in the ductus bursae and ostium. The ostium is a narrow slit in *O. sellingi* sp. n., U-shaped in *O. rorida* Friv. and broadly U-shaped in *O. wolffi* Hacker. The ductus bursae is bent in *O. sellingi* sp. n. and *O. rorida* Friv., whereas it is straight in *O. wolffi*

Hacker. In *O. sellingi*, the sclerotised plate around the ostium the edge towards the corpus bursae is broadly rounded ; in *O. rorida* Friv. it is almost straight.

The new species is named in honour of our Swedish colleague ÅKE SELLING.

#### Notes on other taxa of the *O. rorida* group

The taxon *Orthosia ganimetae* Kornosor & Lödl, 1990 was described from a single male specimen from Adana, Turkey. It was compared



Fig. 9. Female genitalia of *Orthosia sellingi* sp. n. Allotype (gen. prep. Fibiger 2067).

with the sympatric *rorida* Friv., from which it was considered to differ by a more weakly marked forewing and differences in the genitalia. However, the specimen falls within the variation of *rorida* and the apparent differences in the tips of the valves would seem to be due to a preparation artefact. More importantly, the everted vesica and the single bundle of cornuti are not different to that found in *rorida*. *Orthosia ganimetae* Kornosor & Lödl, 1990 is therefore considered to be a synonym of *O. rorida* Frivaldsky, 1835, **syn.n.**

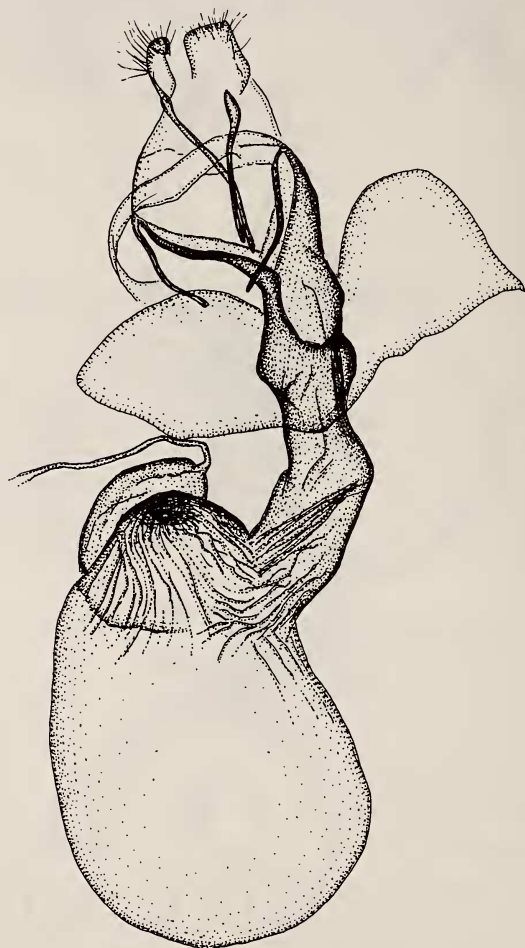


Fig. 10. Female genitalia of *Orthosia rorida* (Frivaldsky, 1835). Greece, Alexandropolis, Kirki, 2.-3.IV.1985 (gen. prep. Fibiger 2084).



The taxon *O. rorida mundoides* Boursin, 1940 was considered by Kornosor & Lödl (1990) to be infrasubspecific and therefore unavailable. However, it was first described as a "form or sp.", and later in the same paper as a subspecies. It was described from a female from the Lebanon and a male from Albania. The Lebanon specimen was considered to represent a subspecies by Ellison & Wiltshire (1939). The taxon could therefore be considered as available. The present authors have not had the possibility to examine *mundoides*. However, having

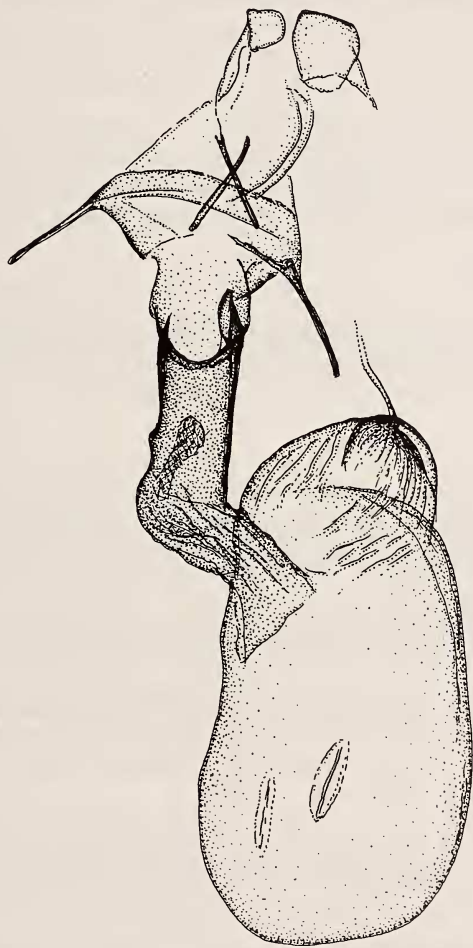


Fig. 11. Female genitalia of *Orthosia wolffi* (Hacker, 1988). Holotype (gen. prep. Hacker 4073).

studied the remarkable infraspecific variation of *O. rorida*, it is our opinion that the name *mundoides* will probably go into synonymy with *O. rorida* Friv.

### Technical note

To be able to compare genitalia figures it is important to be consistent when making the preparation. The valve of the species in the *O. rorida* Friv. group is heavily sclerotised and the tips are bowed towards each other. When mounting under a coverslip it is necessary to unfold and flatten the valves, i.e. press the tips to the same horizontal position as the rest of the valves. The same rules on consistency of preparation must be followed with everted vesica preparations. It is proposed that figures of aedeagi with everted vesica are consistently displayed from the left lateral side with the apex of the aedeagus and base of the vesica to the right and the aedeagus seminalis preferably pointing upwards (however, sometimes the shape of the vesica makes this impossible).

### Acknowledgements

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